Abstract

A switched-mode Class F power amplifier is provided for parallel connection with at least one other like amplifier, within a Chireix architecture, for combining the signals output therefrom. An input component includes at least one active device configured to be alternately switched by a signal input thereto to present an amplified signal corresponding to the input signal and constituting a low output impedance voltage source. A lumped element impedance inverter is provided between the input component and an output resonator component, the impedance inverter being configured for transforming the low output impedance voltage source to instead constitute a high output impedance current source configured for said parallel connection. In accordance with the invention, the negative reactive component values required by the impedance inverter are eliminated and effectively provided by incorporating those values into pre-selected reactive components of the input and output components. Further, a source-drain parasitic capacitance across the active device is eliminated by one or more pre-selected reactive components of the input component, the value(s) of which effectively compensate for the parasitic capacitance.